

ABSTRACT OF THE DISCLOSURE

The present invention relates to an optical component and others in structure capable of implementing improved compensation for a gain slope.

5       The optical component is equipped with first and second Mach-Zehnder interferometers. The first Mach-Zehnder interferometer is provided with a first temperature controller for controlling a temperature of at least one of a part of an optical main path and a first optical side path, while the second Mach-Zehnder interferometer 42 is also provided with a second temperature controller for controlling a temperature of at least one of a part of the optical main path and a second optical side path. A filter circuit having a wavelength-dependent insertion loss is disposed between the first and second Mach-Zehnder interferometers, and a controller controls the temperatures of the optical paths by use of the first and second temperature controllers on the basis of the insertion loss of the 10 filter circuit, thereby setting a loss for light of a predetermined wavelength propagating between a light input end and a light output end.

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